Kent Lindquist White Paper

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AEIC Antelope upgrade from 4.1 to 4.2u

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Upgrade Antelope distribution from 4.1 to 4.2

The installation of the snapshot Antelope 4.2 prerelease from June 1999 required me to sidestep the normal installation procedure, copying over many things from the CD by hand. This is just the quirks from an Alpha release. Among other things the CD did not contain data/maps/mapdata so I had to take a copy from 4.1--they're the same.

The snapshot pre-release has dbloc2, but DanQ updated it since so I untarred that into the new version.

Changing over the lab environment for Antelope 4.2 required changing the ANTELOPE environment variable in /usr/tools/setup/setenv, and also in my own setup files. Also, the PERLLIB environment variable is no longer used (I'm suspicious about /usr/local/tbk though), so I removed it.

So far all of my work has been done from nordic, affecting disks mounted on sgms2. We'll have to propagate to other servers at some point.

Right now /usr/bin/perl is a soft-link to /usr/local/bin/perl. The latter is an actual file, Identical to /opt/antelope/4.1/perl/bin/perl. The new perl is one directory higher in Antelope, in an attempt to make it more independent from the specific antelope release. Therefore I copied the new /opt/antelope/perl/bin/perl to /usr/local/bin. Actually there are a number of other executables in /opt/antelope/perl/bin/perl as well. I copied them all to /usr/local/bin. Likewise, /opt/antelope/perl/man has lots of man pages in man1 and man3 which I put in /usr/local/man, often overwriting the old versions.

The license server changes with each release. I got a new license from DanQ and installed it. It expires 9/30/99.

I've tried to encapsulate all site-local mods into clean, organized directories, rather than modify the antelope distribution itself . Otherwise these upgrades are just way too hard. I copied data/maps/site, data/pf/site, and data/schemas2/site from the 4.1to the 4.2 distribution.

The travel-time models we've installed for dbloc2 are not cleanly compartmentalized. I had to copy them by hand from data/tables/genloc/ttlvz between distributions. Right now this is augustine.pf, gulfak.pf, kilauea_hg50.pf, northak.pf, pav_dut.pf, red_ili.pf, and scak.pf.

There are some very minor changes in the tcl7.4tk4.0 and tcltk8.0 directories. As far as I can see a couple font specifications changed, and some BLT libraries got moved or tweaked a bit--new names for libBLT.a_save etc. I'll move the old ones to backup directories and copy in the new ones from CD.

To account for the removal of the PERLLIB environment variable, all perl scripts that say "use Datascope" now need the line "use lib "$ENV{ANTELOPE}/data/perl" ;" I added this line to

/usr/tools/scripts

- archive_status_plot
- capitalize_station
- tabulate_missed_stations
- translate_stachan_names

/usr/local/bin

- db2cnss
- pick2db

/usr/tools/bin

- aeic_respond
- mail_parser
- remove_old_archive_waveforms
- set_pde_orids
- split_archive_database

/Seis/kiska/apache_1.3/cgi-bin/

- release_info.pl

release_info.pl was failing because we have some web-page gif files with timestamps that are screwy: the number of seconds is '99'. The old epoch command would roll them over, trying its best to 'do the right thing'. The new epoch just throws up its hands, also spitting out a message to stderr which was corrupting the output to cgi from the Perl script.

```
nordic# epoch
03/24/98 19:25:99
epoch: bad input '19:25:99'
epoch: couldn't convert input time
  890697600.000 (083) 1998-03-24  00:00:00:000 UTC Tuesday
nordic# /opt/antelope/4.1/bin/epoch
03/24/98 19:25:99
  890767599.000 (083) 1998-03-24  19:26:39:000 UTC Tuesday
nordic#
```

I fixed this problem by removing the garbage from the perl-script input.

release_info.pl is also failing because it now has use lib $ENV{ANTELOPE} etc. in it but when the Apache server launches the perl script, it does not inherit the correct environment with the $ANTELOPE variable preserved. Mitch and I tried lots of hacking of .profile scripts etc. and hunting in the Apache server setup to no avail, so for now--ugh--I hacked in /opt/antelope/4.2 to the use lib include statement in release_info.pl.

Danny sent me the source code for dbap.c, so I created a src tree for it and recompiled.

Machines with independent copies of Antelope are

- sgms2
- earlybird

marvin
beam

I installed everything on sgms2. Then I copied the current /opt/antelope/ on earlybird to /Seis/ space, blew the existing one away, and did
earlybird:root 17 tcsh## pwd
/opt/antelope
earlybird:root 18 tcsh## foreach f (4.2 dbdemo doc perl rtdemo_alaska tcl7.4tk4.0 tcltk8.0)
foreach? cpdir /net/sgms2/opt/antelope/$f ./$f
foreach? end

dbwish8 in the 4.2 release claims it can't find dbwish8-sparc-5.6-32. There's a 5.5.1 version present so for now, on Dan Quinlan's advice, I soft linked it.

Now we need to modify the real-time systems. rtexec.pf is on
- nordic
- ice
- earlybird

beam
- fk

marvin
- megathrust
- ugle
- strike

These need the Defines array put in; the PRESERVE keyword in the correct places and the TZ and TERM environment variables added; the $ORB variable used where appropriate; and the Incident_info array copied in. Also, the link to archive@ in the run directory needs to be changed to db@. Correspondingly, references to the archive directory in rtexec.pf need to change to references to db.

I did this all on nordic, and at this point I think I've made enough of a mess of my development system that I'm just going to reboot.

I hard-linked rtexec.pf to both the run and pf directories, consistent with the new plan (checked with Quinlan on this).

Recompile relevant software:
/usr/local/seis_apps/ak_dbmapevents/guralp2orb
/usr/local/seis_apps/guralp2orb/guralp2orb
/usr/local/seis_apps/orb_quake_email/orb_quake_email
/usr/local/seis_apps/aeic_orborigintrigger/aeic_orborigintrigger
/usr/local/seis_apps/aeic_ah_excerpt/aeic_ah_excerpt
/usr/local/seis_apps/aeic_dbplotcov/aeic_dbplotcov
/usr/local/seis_apps/adsend2orb/adsend2orb
/opt/iceworm/Development/src

/opt/iceworm/Backup/src
/opt/iceworm/Operation/src

I had to remove the #include for socketvar.h in adsend2orb.c in order to get it to compile. Unsettling.

I had to change aeic_ah_excerpt.pf to reflect the renaming of the run/archive directory to run/db.

I installed a new version of dbloc_delorids, provided by DanQ, since the one we had was compiled for a Solaris2.7 machine thus requiring librt.so.1 which we don't have on Solaris2.6.

I put in several new libcoords, libstock, and libtr patches from DanQ.

All the lib*.so files on my /opt/antelope/4.2 installation turned out as copies of rather than softlinks to lib*.so.3. I fixed these all by hand.

I copied in a new version of spawn.pl from Dan to try to kill off leftover cat processes from dbloc2 quitting.

I installed an updated version of trdisp from Dan to avoid a segmentation fault.

The archive_status_plot script relied on the old interpretation of jdate by the epoch command. I had to tweak the script to put a "-" into the year-jday start-time to avoid confusing aeic_dbplotcov.